FEMS Microbiology Letters 41 (1987) 361–364
Published by Elsevier

FEMS Microbiology Letters

AUTHOR INDEX VOLUME 41 (1987)

Ahmad, M.H., see McLaughlin, W. (41) 331
Antranikian, G., Herzberg, C., Mayer, F. and Gottschalk, G.
Changes in the cell envelope structure of *Clostridium* sp. strain EM1 during massive production of α-amylase and pullulanase (41) 193
Arancia, G., see Molinari, A. (41) 69
Armstrong, J.T., see Moir, P.D. (41) 103
Asao, T., see Kozaki, S. (41) 147
Ashby, A.M., Watson, M.D. and Shaw, C.H.
A Ti-plasmid determined function is responsible for chemotaxis of *Agrobacterium tumefaciens* towards the plant wound product acetosyringone (41) 189
Attwood, M.M., see Brooke, A.G. (41) 41

Barclay, S.L., see Ntamere, A.S. (41) 29
Beacham, I.R., see Jerlström, P.G. (41) 127
Beer-Romero, P. and Gest, H.
Heliobacillus mobilis, a peritrichously flagellated anoxyphototroph containing bacteriochlorophyll *g* (41) 109
Benedí, V.J., see Tomás, J.M. (41) 223
Bhatnagar, L., Krzycki, J.A. and Zeikus, J.G.
Analysis of hydrogen metabolism in *Methanosarcina barkeri*: regulation of hydrogenase and role of CO-dehydrogenase in H_2 production (41) 337
Blondeau, R.
Generation of hydroxyl analogous radicals by *Arthrobacter* sp. (41) 263
Boyer, M.-H., Cami, B., Kotoujansky, A., Chambost, J.-P., Frixon, C. and Cattanéo, J.
Isolation of the gene encoding the major endoglucanase of *Erwinia chrysanthemi*. Homology between *cel* genes of two strains of *Erwinia chrysanthemi* (41) 351
Bradley, D.E. and Taylor, D.E.
Transposition from RP4 to other replicons of a tellurite-resistance determinant not normally expressed by IncPα plasmids (41) 237
Brooke, A.G., Duchars, M.G. and Attwood, M.M.
Nitrogen assimilation in the facultative methylotroph *Hyphomicrobium* X (41) 41

Caballero, F.J., Cárdenas, J. and Castillo, F.
Involvement of sulphydryl groups in glutamine synthetase activity from *Rhodobacter capsulatus* E1F1 (41) 7
Cami, B., see Boyer, M.-H. (41) 351
Cárdenas, J., see Caballero, F.J. (41) 7
Castillo, F., see Caballero, F.J. (41) 7
Cattanéo, J., see Boyer, M.-H. (41) 351
Chambost, J.-P., see Boyer, M.-H. (41) 351
Cheung, R., see Petric, M. (41) 63
Cid, A., Gancedo, C. and Lagunas, R.
Inactivation of the glucose transport system in sporulating yeast (41) 59
Collins, M.D., Howarth, O.W., Grund, E. and Kroppenstedt, R.M.
Isolation and structural determination of new members of the vitamin K_2 series in *Nocardia brasiliensis* (41) 35
Collins, M.D., see Fernandez, F. (41) 175
Corbett, C.M. and Ingledew, W.J.
Is $Fe^{3+/2+}$ cycling an intermediate in sulphur oxidation by Fe^{2+}-grown *Thiobacillus ferrooxidans*? (41) 1
Costerton, J.W., see Jacques, M. (41) 23
Crane, M.R., see Schiemann, D.A. (41) 19

Dalton, H., see McPheat, W.L. (41) 185
Datta, A., see Roy, B.G. (41) 327
Débarbouillé, M., Kunst, F., Klier, A. and Rapoport, G.
Cloning of the *sacS* gene encoding a positive regulator of the sucrose regulon in *Bacillus subtilis* (41) 137
Dehlin, E., see Melin, L. (41) 141
Dijkema, C., see Houwen, F.P. (41) 269
Dobrová, Z., see Jirešová, M. (41) 279
Dobson, G., see Embley, T.M. (41) 131
Donelli, G., see Molinari, A. (41) 69
Dow, J.M. and Villa, V.D.
A novel endo-β(1,4)-D-glucuronidase activity in *Mucor rouxii* (41) 91
Duchars, M.G., see Brooke, A.G. (41) 41

Edwards, C., see Hart, A.J. (41) 345
Embley, T.M., Wait, R., Dobson, G. and Goodfellow, M.
Fatty acid composition in the classification of *Saccharopolyspora hirsuta* (41) 131

Fernandez, F. and Collins, M.D.
Vitamin K composition of anaerobic gut bacteria (41) 175
Fierro, J.F., Parra, F., Quiros, L.M., Hardisson, C. and Salas, J.A.
Heterogeneity of the ribosomal protein pattern in mycelium of *Streptomyces* species (41) 283
Fridén, H., Hederstedt, L. and Rutberg, L.
Deletion of the *Bacillus subtilis sdh* operon (41) 203
Frixon, C., see Boyer, M.-H. (41) 351
Fukui, K., see Kokeguchi, S. (41) 13

Gancedo, C., see Cid, A. (41) 59
Ganguly, N.K., see Sharma, S. (41) 295

Garg, U.C., see Sharma, S. (41) 295
Gest, H., see Beer-Romero, P. (4) 109
Glass, R.E., see Moir, P.D. (41) 103
Goebel, W., see Schmoll, T. (41) 229
Goodfellow, M., see Embley, T.M. (41) 131
Goto, H. and Rylander, R.
Enhancement of endotoxin activity by pulmonary surfactant (41) 199
Gottschalk, G., see Antranikian, G. (41) 193
Gower, D.B., see Nixon, A. (41) 53
Grant, G.A., see Page, W.J. (41) 257
Gruber, H., see Panda, T. (41) 85
Grund, E., see Collins, M.D. (41) 35
Guffanti, A.A. and Hou, E.
The effect of pH on the passive proton conductance of *Bacillus acidocaldarius* (41) 275
Guild, W.R., see Pozzi, G. (41) 309

Hacker, J., see Schmoll, T. (41) 229
Hafeez, A., see Kazmi, R.R. (41) 153
Hamana, K. and Matsuzaki, S.
Distribution of polyamines in actinomycetes (41) 211
Hardisson, C., see Fierro, J.F. (41) 283
Hart, A.J. and Edwards, C.
Respiratory oscillations in synchronised *Paracoccus denitrificans* (41) 345
Hederstedt, L., see Fridén, H. (41) 203
Herzberg, C., see Antranikian, G. (41) 193
Hinton, M., Lim, S.K. and Linton, A.H.
The influence of antibacterial agents on the complexity of the *Escherichia coli* flora of chickens (41) 169
Hou, E., see Guffanti, A.A. (41) 275
Houwen, F.P., Dijkema, C., Schoenmakers, C.H.H., Stams, A.J.M. and Zehnder, A.J.B.
^{13}C-NMR study of propionate degradation by a methanogenic coculture (41) 269
Howarth, O.W., see Collins, M.D. (41) 35
Hunter, M.G., see Moir, P.D. (41) 103
Hynes, R.K.
Use of liquid chromatography to measure chlorite production by *Nitrobacter winogradskyi* NRCC26538 (41) 181

Ingledew, W.J., see Corbett, C.M. (41) 1

Jackman, P.J.H., see Nixon, A. (41) 53
Jacques, M. and Costerton, J.W.
Adhesion of group B *Streptococcus* to a polyethylene intrauterine contraceptive device (41) 23
James, S.M. and Tagg, J.R.
Streptococcal and enterococcal inhibition of endocervical lactobacilli (41) 321
Janeček, J., see Jirešová, M. (41) 279
Jerlström, P.G., Liu, J. and Beacham, I.R.
Regulation of *Escherichia coli* L-asparaginase II and L-aspartase by the *fnr* gene-product (41) 127
Jirešová, M., Dobrová, Z., Náprstek, J., Ryšavý, P. and Janeček, J.
The cellobiose uptake system in *Streptomyces granaticolor* (41) 279
Jofre, J.T., see Tomás, J.M. (41) 223

Kahru, A., Paalme, T. and Vilu, R.
Effect of temperature on the ATP pool and adenylate energy charge in *Escherichia coli* (41) 305
Karibian, D. and Starka, G.
The penicillin-binding proteins of *Zymomonas mobilis* Zm4 (41) 121
Karmali, M.A., see Petric, M. (41) 63
Kato, K., see Kokeguchi, S. (41) 13
Kato, K., see Kozaki, S. (41) 147
Kawata, T., see Masuda, K. (41) 73
Kazmi, R.R., Hafeez, A. and Kazmi, S.U.
Polymicrobial infection in *Campylobacter jejuni* enteritis in Karachi (41) 153
Kazmi, S.U., see Kazmi, R.R. (41) 153
Kihlström, E., see Söderlund, G. (41) 163
Klier, A., see Débarbouillé, M. (41) 137
Kokeguchi, S., Ohta, H., Fukui, K., Kato, K. and Tsujimoto, M.
Amphipathic antigen from *Eubacterium nodatum* (41) 13
Kotoujansky, A., see Boyer, M.-H. (41) 351
Kozaki, S., Kurokawa, A., Asao, T., Kato, K., Uemura, T. and Sakaguchi, G.
Enzyme-linked immunosorbent assay for *Aeromonas hydrophila* hemolysins (41) 147
Kroppenstedt, R.M., see Collins, M.D. (41) 35
Krzycki, J.A., see Bhatnagar, L. (41) 337
Kubicek, C.P., see Panda, T. (41) 85
Kunst, F., see Débarbouillé, M. (41) 137
Kurokawa, A., see Kozaki, S. (41) 147

Lagunas, R., see Cid, A. (41) 59
Lim, S.K., see Hinton, M. (41) 169
Lingens, F., see Thiele, J. (41) 115
Linton, A.H., see Hinton, M. (41) 169
Liu, J., see Jerlström, P.G. (41) 127

McLaughlin, W., Singh, I. and Ahmad, M.H.
Characterization of Tn*5*-induced symbiotically defective mutants of cowpea rhizobia (41) 331
McNally, T., see McPheat, W.L. (41) 357
McPheat, W.L. and McNally, T.
Phase I and phase IV strains of *Bordetella pertussis* carry a repeated DNA sequence not found in other *Bordetella* species (41) 357
McPheat, W.L., Mann, N.H. and Dalton, H.
Transfer of broad host range plasmids to the type I obligate methanotroph *Methylomonas albus* (41) 185
Magnin, J.-P., Willison, J.C. and Vignais, P.M.
Elimination of R plasmids from the photosynthetic bacterium *Rhodobacter capsulatus* (41) 157
Mallet, A.I., see Nixon, A. (41) 53
Mann, N.H., see McPheat, W.L. (41) 185
Mantle, P.G., see Yeulet, S.E. (41) 207

Masuda, K. and Kawata, T.
Cleavage and isolation of the outer sheath of *Treponema phagedenis* by treatment with *N,N'*-dicyclohexylcarbodiimide (41) 73
Matsuzaki, S., see Hamana, K. (41) 211
Mayer, F., see Antranikian, G. (41) 193
Melin, L. and Dehlin, E.
Functional comparison of an 'early' and a 'late' promoter-active DNA segment from coliphage T5 in *Bacillus subtilis* and in *Escherichia coli* (41) 141
Moir, P.D., Hunter, M.G., Armstrong, J.T. and Glass, R.E.
Studies on the gene for the multivalent vitamin B_{12} receptor of *Escherichia coli* (41) 103
Mol, P.C. and Wessels, J.G.H.
Linkages between glucosaminoglycan and glucan determine alkali-insolubility of the glucan in walls of *Saccharomyces cerevisiae* (41) 95
Molinari, A., Von Hunolstein, C., Donelli, G., Paradisi, S., Arancia, G. and Orefici, G.
Effects of some capsular components on pathogenicity of type IV and provisional type V group B streptococci (41) 69
Müller, R., see Thiele, J. (41) 115
Muthukumar, G., Nickerson, A.W. and Nickerson, K.W.
Calmodulin levels in yeasts and filamentous fungi (41) 253

Nagahama, M., see Sakurai, J. (41) 317
Náprstek, J., see Jirešová, M. (41) 279
Nickerson, A.W., see Muthukumar, G. (41) 253
Nickerson, K.W., see Muthukumar, G. (41) 253
Nicolaidis, A.A. and Sargent, A.W.
Isolation of methane monooxygenase-deficient mutants from *Methylosinus trichosporium* OB3b using dichloromethane (41) 47
Niesel, D.W. and Peterson, J.W.
Calcium enhances *Salmonella typhimurium* invasion of HeLa cells (41) 299
Nixon, A., Jackman, P.J.H., Mallet, A.I. and Gower, D.B.
Testosterone metabolism by pure and mixed cultures of human corynebacteria (41) 53
Ntamere, A.S. and Barclay, S.L.
Protein synthesis in cell-free extracts of *Dictyostelium discoideum* (41) 29

Ohta, H., see Kokeguchi, S. (41) 13
Ölander, R.-M., see Paloheimo, M. (41) 79
Orefici, G., see Molinari, A. (41) 69

Paalme, T., see Kahru, A. (41) 305
Page, W.J. and Grant, G.A.
Effect of mineral iron on the development of transformation competence in *Azotobacter vinelandii* (41) 257
Paloheimo, M., Ölander, R.-M. and Runeberg-Nyman, K.
Failure to convert *Bordetella parapertussis* to *Bordetella pertussis* with a pertussis phage (41) 79
Panda, T., Gruber, H. and Kubicek, C.P.
Stimulation of protein secretion in *Trichoderma reesei* by Tween surfactants is not correlated with changes in enzyme localization or membrane fatty acid composition (41) 85
Paradisi, S., see Molinari, A. (41) 69
Parra, F., see Fierro, J.F. (41) 283
Peterson, J.W., see Niesel, D.W. (41) 299
Petric, M., Karmali, M.A., Richardson, S. and Cheung, R.
Purification and biological properties of *Escherichia coli* verocytotoxin (41) 63
Piddock, L.J.V. and Wise, R.
Induction of the SOS response in *Escherichia coli* by 4-quinolone antimicrobial agents (41) 289
Potts, M., see Stulp, B.K. (41) 241
Pozzi, G. and Guild, W.R.
Alkaline phosphatase inhibits cloning in *Streptococcus pneumoniae* (41) 309

Quiros, L.M., see Fierro, J.F. (41) 283

Rainard, P.
Phagocytosis by bovine polymorphs of glass-adherent *Escherichia coli* in the presence and absence of serum (41) 217
Rapoport, G., see Débarbouillé, M. (41) 137
Richardson, S., see Petric, M. (41) 63
Roy, B.G. and Datta, A.
A calmodulin inhibitor blocks morphogenesis in *Candida albicans* (41) 327
Runeberg-Nyman, K., see Paloheimo, M. (41) 79
Rutberg, L., see Fridén, H. (41) 203
Rylander, R., see Goto, H. (41) 199
Ryšavý, P., see Jirešová, M. (41) 279

Sakaguchi, G., see Kozaki, S. (41) 147
Sakurai, J. and Nagahama, M.
Histidine residues in *Clostridium perfringens* epsilon toxin (41) 317
Salas, J.A., see Fierro, J.F. (41) 283
Sargent, A.W., see Nicolaidis, A.A. (41) 47
Satoh, T., see Yamanaka, H. (41) 313
Schiemann, D.A. and Crane, M.R.
Inhibition of epithelial cell invasion in vitro by *Yersinia enterocolitica* with anticellular antibody (41) 19
Schmoll, T., Hacker, J. and Goebel, W.
Nucleotide sequence of the *sfaA* gene coding for the S-fimbrial protein subunit of *Escherichia coli* (41) 229
Schoenmakers, C.H.H., see Houwen, F.P. (41) 269
Sharma, B.K., see Sharma, S. (41) 295
Sharma, S., Garg, U.C., Ganguly, N.K. and Sharma, B.K.
Effect of iron on early changes in *Escherichia coli*-induced ascending pyelonephritis in rats (41) 295
Shaw, C.H., see Ashby, A.M. (41) 189
Shinoda, S., see Yamanaka, H. (41) 313
Singh, I., see McLaughlin, W. (41) 331
Slegers, L.K., see Van Laere, A.J. (41) 247
Söderlund, G. and Kihlström, E.
Association and uptake studies of a *Chlamydia trachomatis* lymphogranuloma venereum strain by eukaryotic cells (41) 163

Stams, A.J.M., see Houwen, F.P. (41) 269
Starka, G., see Karibian, D. (41) 121
Stulp, B.K. and Potts, M.
Stability of nucleic acids in immobilized and desiccated *Nostoc commune* UTEX584 (Cyanobacteria) (41) 241

Tagg, J.R., see James, S.M. (41) 321
Taylor, D.E., see Bradley, D.E. (41) 237
Thiele, J., Müller, R. and Lingens, F.
Initial characterisation of 4-chlorobenzoate dehalogenase from *Pseudomonas* sp. CBS3 (41) 115
Tomás, J.M., Benedí, V.J. and Jofre, J.T.
Identification of the cell surface receptor for FC3-2, FC3-3 and FC3-6 bacteriophages from *Klebsiella pneumoniae* (41) 223
Tsujimoto, M., see Kokeguchi, S. (41) 13

Uemura, T., see Kozaki, S. (41) 147

Van Laere, A.J. and Slegers, L.K.
Trehalose breakdown in germinating spores of *Mucor rouxii* (41) 247

Vignais, P.M., see Magnin, J.-P. (41) 157
Villa, V.D., see Dow, J.M. (41) 91
Vilu, R., see Kahru, A. (41) 305
Von Hunolstein, C., see Molinari, A. (41) 69

Wait, R., see Embley, T.M. (41) 131
Watson, M.D., see Ashby, A.M. (41) 189
Wessels, J.G.H., see Mol, P.C. (41) 95
Willison, J.C., see Magnin, J.-P. (41) 157
Wise, R., see Piddock, L.J.V. (41) 289

Yamanaka, H., Satoh, T. and Shinoda, S.
Preparation of specific antiserum against *Vibrio vulnificus* hemolysin by immunization with hemolysin-bound liposomes (41) 313
Yeulet, S.E. and Mantle, P.G.
Biosynthesis of auranthine by *Penicillium aurantiogriseum* (41) 207

Zehnder, A.J.B., see Houwen, F.P. (41) 269
Zeikus, J.G., see Bhatnagar, L. (41) 337

FEMS Microbiology Letters 41 (1987) 365–372
Published by Elsevier

FEMS Microbiology Letters

SUBJECT INDEX VOLUME 41 (1987)

Acetosyringone
Agrobacterium tumefaciens; Chemotaxis; Ti-plasmid (Crown gall, *vir*-region) (Ashby, A.M. (41) 189)

Actinomycete
Polyamine; Putrescine; Spermidine; Spermine; Cadaverine (Hamana, K. (41) 211)

Adenylate energy charge
Temperature; ATP pool; *Escherichia coli* (Kahru, A. (41) 305)

Adhesion
Streptococcus sp. (Group B); Polyethylene (Intrauterine contraceptive device) (Jacques, M. (41) 23)

Aeromonas hydrophila
Haemolysin; ELISA (Kozaki, S. (41) 147)

Agrobacterium tumefaciens
Chemotaxis; Ti-plasmid; Acetosyringone (Crown gall, *vir*-region) (Ashby, A.M. (41) 189)

Alkaline phosphatase
Transformation; Plasmid; *Streptococcus pneumoniae*; Gene cloning (Pozzi, G. (41) 309)

Amylase
Clostridium sp.; Pullulanase; Protein excretion; Chemostat; Cell envelope (Antranikian, G. (41) 193)

Anaerobic bacterium
Vitamin K_2; Menaquinone (18 species) (Fernandez, F. (41) 175)

Antigen
Eubacterium nodatum; Lipoteichoic acid; Haemagglutination (Kokeguchi, S. (41) 13)

Antiserum
Vibrio vulnificus; Hemolysin; Immunization (Liposomes) (Yamanaka, H. (41) 313)

***Arthrobacter* sp.**
Hydroxyl radical (Humic acid clearing) (Blondeau, R. (41) 263)

L-Asparaginase
Escherichia coli; L-Aspartase (*fnr* gene) (Jerlström, P.G. (41) 127)

L-Aspartase
Escherichia coli; L-Asparaginase (*fnr* gene) (Jerlström, P.G. (41) 127)

ATP pool
Temperature; Adenylate energy charge; *Escherichia coli* (Kahru, A. (41) 305)

Auranthine
Penicillium aurantiogriseum (Biosynthesis) (Yeulet, S.E. (41) 207)

Azotobacter vinelandii
Transformation; Competence; Iron; Siderophore (Page, W.J. (41) 257)

Bacillus acidocaldarius
pH; Proton conductance (Guffanti, A.A. (41) 275)

Bacillus subtilis
Sucrose; Sucrase; Levansucrase (Gene cloning) (Débarbouillé, M. (41) 137)

Escherichia coli; Bacteriophage T5; Transcription; Promoter (Melin, L. (41) 141)

Succinate dehydrogenase; Operon (Deletion) (Fridén, H. (41) 203)

Bacteriochlorophyll *g*
Heliobacillus mobilis; Nitrogen fixation (Rice paddy ecology) (Beer-Romero, P. (4) 109)

Bacteriocin
Streptococcus sp.; *Lactobacillus* sp.; *Enterococcus* sp. (Growth inhibition) (James, S.M. (41) 321)

Bacteriophage
Bordetella pertussis; *Bordetella parapertussis*; Lysogenic conversion (Paloheimo, M. (41) 79)

Bacteriophage receptor
Klebsiella pneumoniae; Lipopolysaccharide (Tomás, J.M. (41) 223)

Bacteriophage T5
Bacillus subtilis; *Escherichia coli*; Transcription; Promoter (Melin, L. (41) 141)

Benzylpenicillin
Zymomonas mobilis; Penicillin-binding protein; Mecillinam (Karibian, D. (41) 121)

Bordetella parapertussis
Bordetella pertussis; Lysogenic conversion; Bacteriophage (Paloheimo, M. (41) 79)

Bordetella pertussis
Bordetella parapertussis; Lysogenic conversion; Bacteriophage (Paloheimo, M. (41) 79)

Bordetella sp.
DNA sequence, repeated (Phase variants) (McPheat, W.L. (41) 357)

Cadaverine
Actinomycete; Polyamine; Putrescine; Spermidine; Spermine (Hamana, K. (41) 211)

Calcium
Salmonella typhimurium; HeLa cell invasion; Virulence (Niesel, D.W. (41) 299)

Calmodulin
Ceratocystis ulmi; Yeast; Filamentous fungus; Fungal dimorphism (Muthukumar, G. (41) 253)

Candida albicans
Morphogenesis; Trifluoperazine (Roy, B.G. (41) 327)

Capsule
Streptococcus sp. (Group B); Sialic acid; Virulence (Ultrastructure) (Molinari, A. (41) 69)

Carbon monoxide dehydrogenase
Methanosarcina barkeri; Hydrogenase; Methanogenesis (Bhatnagar, L. (41) 337)

Cell envelope
Clostridium sp.; Amylase; Pullulanase; Protein excretion; Chemostat (Antranikian, G. (41) 193)

Cell invasion, epithelial
Yersinia enterocolitica (Inhibition with anticellular antibody) (Schiemann, D.A. (41) 19)

Cellobiose
Membrane transport; *Streptomyces graniticolor* (Jirešová, M. (41) 279)

Cell walls
Saccharomyces cerevisiae; Glucan; Glucosaminoglycan (Mol, P.C. (41) 95)

Ceratocystis ulmi
Calmodulin; Yeast; Filamentous fungus; Fungal dimorphism (Muthukumar, G. (41) 253)

Chemostat
Clostridium sp.; Amylase; Pullulanase; Protein excretion; Cell envelope (Antranikian, G. (41) 193)

Chemotaxis
Agrobacterium tumefaciens; Ti-plasmid; Acetosyringone (Crown gall, *vir*-region) (Ashby, A.M. (41) 189)

Chlamydia trachomatis
Lymphogranuloma venereum (Uptake, Association) (Söderlund, G. (41) 163)

Chlorite
Nitrobacter winogradskyi; Nitrification (HPLC) (Hynes, R.K. (41) 181)

4-Chlorobenzoate dehydrogenase
Pseudomonas sp. (Properties) (Thiele, J. (41) 115)

Clostridium perfringens epsilon toxin
(Histidyl residue) (Sakurai, J. (41) 317)

Clostridium sp.
Amylase; Pullulanase; Protein excretion; Chemostat; Cell envelope (Antranikian, G. (41) 193)

Coculture
Methanogenic bacterium; Succinate; Propionate oxidation; ^{13}C-NMR (Houwen, F.P. (41) 269)

Competence
Azotobacter vinelandii; Transformation; Iron; Siderophore (Page, W.J. (41) 257)

Corynebacterium
Testosterone (Metabolism) (Nixon, A. (41) 53)

Cowpea
Rhizobium sp.; Symbiotic defective mutant; Tn*5* mutagenesis (McLaughlin, W. (41) 331)

Cytotoxin
Escherichia coli; Verocytotoxin; Enterotoxin (Vero cell purification) (Petric, M. (41) 63)

Dichloromethane
Methylosinus trichosporium; Methane monooxygenase (Deficient mutant) (Nicolaidis, A.A. (41) 47)

Dictyostelium discoideum
Protein synthesis (In vitro translation) (Ntamere, A.S. (41) 29)

DNA homology
Erwinia chrysanthemi; Endoglucanase; Gene cloning (Boyer, M.-H. (41) 351)

DNA modification
Nostoc commune; Immobilized cell; Water stress (Stulp, B.K. (41) 241)

DNA sequence, repeated
Bordetella sp. (Phase variants) (McPheat, W.L. (41) 357)

ELISA
Aeromonas hydrophila; Haemolysin (Kozaki, S. (41) 147)

Endoglucanase
Erwinia chrysanthemi; Gene cloning; DNA homology (Boyer, M.-H. (41) 351)

***Enterococcus* sp.**
Streptococcus sp.; *Lactobacillus* sp.; Bacteriocin (Growth inhibition) (James, S.M. (41) 321)

Enterotoxin
Escherichia coli; Verocytotoxin; Cytotoxin (Vero cell purification) (Petric, M. (41) 63)

Erwinia chrysanthemi
Endoglucanase; Gene cloning; DNA homology (Boyer, M.-H. (41) 351)

Escherichia coli
Verocytotoxin; Enterotoxin; Cytotoxin (Vero cell purification) (Petric, M. (41) 63)

Vitamin B_{12} receptor (Gene cloning, expression) (Moir, P.D. (41) 103)

L-Asparaginase; L-Aspartase (*fnr* gene) (Jerlström, P.G. (41) 127)

Bacillus subtilis; Bacteriophage T5; Transcription; Promoter (Melin, L. (41) 141)

Gut flora (Chicken) (Hinton, M. (41) 169)

Lipopolysaccharide; Pulmonary surfactant (Guinea pig) (Goto, H. (41) 199)

Polymorphonuclear leukocyte; Phagocytosis; Opsonin (Rainard, P. (41) 217)

Fimbria (Nucleotide sequence, *sfaA* gene) (Schmoll, T. (41) 229)

Plasmid RP4; Transposition; Tellurite resistance (Bradley, D.E. (41) 237)

RecA protein; SOS-response; 4-Quinolone (*recA*::*lac* fusion) (Piddock, L.J.V. (41) 289)

Iron; Pyelonephritis; Virulence factor (Rat) (Sharma, S. (41) 295)

Temperature; ATP pool; Adenylate energy charge (Kahru, A. (41) 305)

Ethanol
Mucor rouxii; Trehalose; Glycerol; Spore germination (Van Laere, A.J. (41) 247)

Eubacterium nodatum
Lipoteichoic acid; Haemagglutination; Antigen (Kokeguchi, S. (41) 13)

Fatty acid
Trichoderma reesei; Protein secretion; Tween; Membrane fluidity (Panda, T. (41) 85)

Saccharopolyspora hirsuta; Taxonomy (Embley, T.M. (41) 131)

Filamentous fungus
Ceratocystis ulmi; Calmodulin; Yeast; Fungal dimorphism (Muthukumar, G. (41) 253)

Fimbria
Escherichia coli (Nucleotide sequence, *sfaA* gene) (Schmoll, T. (41) 229)

Fungal dimorphism
Ceratocystis ulmi; Calmodulin; Yeast; Filamentous fungus (Muthukumar, G. (41) 253)

Gene cloning
Transformation; Plasmid; *Streptococcus pneumoniae*; Alkaline phosphatase (Pozzi, G. (41) 309)

Erwinia chrysanthemi; Endoglucanase; DNA homology (Boyer, M.-H. (41) 351)

Glucan
Saccharomyces cerevisiae; Cell walls; Glucosaminoglycan (Mol, P.C. (41) 95)

Glucosaminoglycan
Saccharomyces cerevisiae; Cell walls; Glucan (Mol, P.C. (41) 95)

Glucose transport
Saccharomyces cerevisiae; Sporulation (Transport inactivation) (Cid, A. (41) 59)

endo-β(1,4)-D-Glucuronidase
Mucor rouxii; Mucoric acid; Lysis (Dow, J.M. (41) 91)

Glutamate dehydrogenase
Hyphomicrobium sp.; Glutamine synthetase; Glutamate synthase (Brooke, A.G. (41) 41)

Glutamate synthase
Hyphomicrobium sp.; Glutamate dehydrogenase; Glutamine synthetase (Brooke, A.G. (41) 41)

Glutamine synthetase
Rhodobacter capsulatus (Sulphydryl group) (Caballero, F.J. (41) 7)

Hyphomicrobium sp.; Glutamate dehydrogenase; Glutamate synthase (Brooke, A.G. (41) 41)

Glycerol
Mucor rouxii; Trehalose; Ethanol; Spore germination (Van Laere, A.J. (41) 247)

Gut flora
Escherichia coli (Chicken) (Hinton, M. (41) 169)

pH
Bacillus acidocaldarius; Proton conductance (Guffanti, A.A. (41) 275)

Haemagglutination
Eubacterium nodatum; Lipoteichoic acid; Antigen (Kokeguchi, S. (41) 13)

Haemolysin
Aeromonas hydrophila; ELISA (Kozaki, S. (41) 147)

HeLa cell invasion
Salmonella typhimurium; Calcium; Virulence (Niesel, D.W. (41) 299)

Heliobacillus mobilis
Bacteriochlorophyll *g*; Nitrogen fixation (Rice paddy ecology) (Beer-Romero, P. (4) 109)

Hemolysin
Antiserum; *Vibrio vulnificus*; Immunization (Liposomes) (Yamanaka, H. (41) 313)

Heterogeneity
Streptomyces sp; Ribosome; Ribosomal protein; (HPLC) (Fierro, (41) 283)

HPLC
Streptomyces sp; Ribosome; Ribosomal protein; Heterogeneity) (Fierro, (41) 283)

Hydrogenase
Methanosarcina barkeri; Methanogenesis; Carbon monoxide dehydrogenase (Bhatnagar, L. (41) 337)

Hydroxyl radical
Arthrobacter sp. (Humic acid clearing) (Blondeau, R. (41) 263)

***Hyphomicrobium* sp.**
Glutamate dehydrogenase; Glutamine synthetase; Glutamate synthase (Brooke, A.G. (41) 41)

Immobilized cell
Nostoc commune; DNA modification; Water stress (Stulp, B.K. (41) 241)

Immunization
Antiserum; *Vibrio vulnificus*; Hemolysin (Liposomes) (Yamanaka, H. (41) 313)

Iron
Thiobacillus ferrooxidans; Sulphur oxidation (Corbett, C.M. (41) 1)

Azotobacter vinelandii; Transformation; Competence; Siderophore (Page, W.J. (41) 257)

Escherichia coli; Pyelonephritis; Virulence factor (Rat) (Sharma, S. (41) 295)

Isoprenoid quinone
Nocardia brasiliensis; Vitamin K_2; Menaquinone (structure) (Collins, M.D. (41) 35)

Klebsiella pneumoniae
Lipopolysaccharide; Bacteriophage receptor (Tomás, J.M. (41) 223)

***Lactobacillus* sp.**
Streptococcus sp.; *Enterococcus* sp.; Bacteriocin (Growth inhibition) (James, S.M. (41) 321)

Levansucrase
Bacillus subtilis; Sucrose; Sucrase (Gene cloning) (Débarbouillé, M. (41) 137)

Lipopolysaccharide
Escherichia coli; Pulmonary surfactant (Guinea pig) (Goto, H. (41) 199)

Klebsiella pneumoniae; Bacteriophage receptor (Tomás, J.M. (41) 223)

Lipoteichoic acid
Eubacterium nodatum; Haemagglutination; Antigen (Kokeguchi, S. (41) 13)

Lymphogranuloma venereum
Chlamydia trachomatis (Uptake, Association) (Söderlund, G. (41) 163)

Lysis
Mucor rouxii; Mucoric acid; endo-β(1,4)-D-Glucuronidase (Dow, J.M. (41) 91)

Lysogenic conversion
Bordetella pertussis; *Bordetella parapertussis*; Bacteriophage (Paloheimo, M. (41) 79)

Mecillinam
Zymomonas mobilis; Penicillin-binding protein; Benzylpenicillin (Karibian, D. (41) 121)

Membrane fluidity
Trichoderma reesei; Protein secretion; Tween; Fatty acid (Panda, T. (41) 85)

Membrane transport
Cellobiose; *Streptomyces graniticolor* (Jirešlová, M. (41) 279)

Menaquinone
Nocardia brasiliensis; Vitamin K_2; Isoprenoid quinone (structure) (Collins, M.D. (41) 35)

Vitamin K_2; Anaerobic bacterium (18 species) (Fernandez, F. (41) 175)

Methane monooxygenase
Methylosinus trichosporium; Dichloromethane (Deficient mutant) (Nicolaidis, A.A. (41) 47)

Methanogenesis
Methanosarcina barkeri; Hydrogenase; Carbon monoxide dehydrogenase (Bhatnagar, L. (41) 337)

Methanogenic bacterium
Succinate; Propionate oxidation; (Coculture; ^{13}C-NMR) (Houwen, F.P. (41) 269)

Methanosarcina barkeri
Hydrogenase; Methanogenesis; Carbon monoxide dehydrogenase (Bhatnagar, L. (41) 337)

Methylomonas albus
Plasmid transfer (McPheat, W.L. (41) 185)

Methylosinus trichosporium
Dichloromethane; Methane monooxygenase (Deficient mutant) (Nicolaidis, A.A. (41) 47)

Morphogenesis
Candida albicans; Trifluoperazine (Roy, B.G. (41) 327)

Mucoric acid
Mucor rouxii; endo-β(1,4)-D-Glucuronidase; Lysis (Dow, J.M. (41) 91)

Mucor rouxii
Mucoric acid; endo-β(1,4)-D-Glucuronidase; Lysis (Dow, J.M. (41) 91)

Trehalose; Glycerol; Ethanol; Spore germination (Van Laere, A.J. (41) 247)

Nitrification
Nitrobacter winogradskyi; Chlorite (HPLC) (Hynes, R.K. (41) 181)

Nitrobacter winogradskyi
Chlorite; Nitrification (HPLC) (Hynes, R.K. (41) 181)

Nitrogen fixation
Heliobacillus mobilis; Bacteriochlorophyll *g* (Rice paddy ecology) (Beer-Romero, P. (4) 109)

^{13}C-NMR)
Methanogenic bacterium; Succinate; Propionate oxidation; (Coculture (Houwen, F.P. (41) 269)

***N,N'*-Dicyclohexylcarbodiimide**
Treponema phagedenis; Outer sheath (Masuda, K. (41) 73)

Nocardia brasiliensis
Vitamin K_2; Menaquinone; Isoprenoid quinone (structure) (Collins, M.D. (41) 35)

Nostoc commune
Immobilized cell; DNA modification; Water stress (Stulp, B.K. (41) 241)

Operon
Bacillus subtilis; Succinate dehydrogenase (Deletion) (Fridén, H. (41) 203)

Opsonin
Escherichia coli; Polymorphonuclear leukocyte; Phagocytosis (Rainard, P. (41) 217)

Outer sheath
Treponema phagedenis; *N,N'*-Dicyclohexylcarbodiimide (Masuda, K. (41) 73)

Paracoccus denitrificans
Respiration (Synchronous culture) (Hart, A.J. (41) 345)

Penicillin-binding protein
Zymomonas mobilis; Mecillinam; Benzylpenicillin (Karibian, D. (41) 121)

Penicillium aurantiogriseum
Auranthine (Biosynthesis) (Yeulet, S.E. (41) 207)

Phagocytosis
Escherichia coli; Polymorphonuclear leukocyte; Opsonin (Rainard, P. (41) 217)

Plasmid
Transformation; *Streptococcus pneumoniae*; Alkaline phosphatase; Gene cloning (Pozzi, G. (41) 309)

Plasmid curing
Rhodobacter capsulatus; R plasmid (Magnin, J.-P. (41) 157)

Plasmid RP4
Escherichia coli; Transposition; Tellurite resistance (Bradley, D.E. (41) 237)

Plasmid transfer
Methylomonas albus (McPheat, W.L. (41) 185)

Polyamine
Actinomycete; Putrescine; Spermidine; Spermine; Cadaverine (Hamana, K. (41) 211)

Polyethylene
Streptococcus sp. (Group B); Adhesion (Intrauterine contraceptive device) (Jacques, M. (41) 23)

Polymorphonuclear leukocyte
Escherichia coli; Phagocytosis; Opsonin (Rainard, P. (41) 217)

Promoter
Bacillus subtilis; *Escherichia coli*; Bacteriophage T5; Transcription (Melin, L. (41) 141)

Propionate oxidation
Methanogenic bacterium; Succinate; (Coculture; ^{13}C-NMR) (Houwen, F.P. (41) 269)

Protein excretion
Clostridium sp.; Amylase; Pullulanase; Chemostat; Cell envelope (Antranikian, G. (41) 193)

Protein secretion
Trichoderma reesei; Tween; Membrane fluidity; Fatty acid (Panda, T. (41) 85)

Protein synthesis
Dictyostelium discoideum (In vitro translation) (Ntamere, A.S. (41) 29)

Proton conductance
Bacillus acidocaldarius; pH (Guffanti, A.A. (41) 275)

***Pseudomonas* sp.**
4-Chlorobenzoate dehydrogenase (Properties) (Thiele, J. (41) 115)

Pullulanase
Clostridium sp.; Amylase; Protein excretion; Chemostat; Cell envelope (Antranikian, G. (41) 193)

Pulmonary surfactant
Escherichia coli; Lipopolysaccharide (Guinea pig) (Goto, H. (41) 199)

Putrescine
Actinomycete; Polyamine; Spermidine; Spermine; Cadaverine (Hamana, K. (41) 211)

Pyelonephritis
Iron; *Escherichia coli*; Virulence factor (Rat) (Sharma, S. (41) 295)

4-Quinolone
RecA protein; *Escherichia coli*; SOS-response (*recA*::*lac* fusion) (Piddock, L.J.V. (41) 289)

RecA protein
Escherichia coli; SOS-response; 4-Quinolone (*recA*::*lac* fusion) (Piddock, L.J.V. (41) 289)

Respiration
Paracoccus denitrificans (Synchronous culture) (Hart, A.J. (41) 345)

***Rhizobium* sp.**
Symbiotic defective mutant; (Cowpea; Tn*5* mutagenesis) (McLaughlin, W. (41) 331)

Rhodobacter capsulatus
Glutamine synthetase (Sulphydryl group) (Caballero, F.J. (41) 7)

R plasmid; Plasmid curing (Magnin, J.-P. (41) 157)

Ribosomal protein
Streptomyces sp; Ribosome; (HPLC; Heterogeneity) (Fierro, (41) 283)

Ribosome
Streptomyces sp; Ribosomal protein; (HPLC; Heterogeneity) (Fierro, (41) 283)

R plasmid
Rhodobacter capsulatus; Plasmid curing (Magnin, J.-P. (41) 157)

Saccharomyces cerevisiae
Glucose transport; Sporulation (Transport inactivation) (Cid, A. (41) 59)

Cell walls; Glucan; Glucosaminoglycan (Mol, P.C. (41) 95)

Saccharopolyspora hirsuta
Taxonomy; Fatty acids (Embley, T.M. (41) 131)

Salmonella typhimurium
HeLa cell invasion; Calcium; Virulence (Niesel, D.W. (41) 299)

Sialic acid
Streptococcus sp. (Group B); Capsule; Virulence (Ultrastructure) (Molinari, A. (41) 69)

Siderophore
Azotobacter vinelandii; Transformation; Competence; Iron (Page, W.J. (41) 257)

SOS-response
RecA protein; *Escherichia coli*; 4-Quinolone (*recA*::*lac* fusion) (Piddock, L.J.V. (41) 289)

Spermidine
Actinomycete; Polyamine; Putrescine; Spermine; Cadaverine (Hamana, K. (41) 211)

Spermine
Actinomycete; Polyamine; Putrescine; Spermidine; Cadaverine (Hamana, K. (41) 211)

Spore germination
Mucor rouxii; Trehalose; Glycerol; Ethanol (Van Laere, A.J. (41) 247)

Sporulation
Saccharomyces cerevisiae; Glucose transport (Transport inactivation) (Cid, A. (41) 59)

Streptococcus pneumoniae
Transformation; Plasmid; Alkaline phosphatase; Gene cloning (Pozzi, G. (41) 309)

Streptococcus sp.
Lactobacillus sp.; *Enterococcus* sp.; Bacteriocin (Growth inhibition) (James, S.M. (41) 321)

Streptococcus sp. (Group B)
Adhesion; Polyethylene (Intrauterine contraceptive device) (Jacques, M. (41) 23)

Capsule; Sialic acid; Virulence (Ultrastructure) (Molinari, A. (41) 69)

Streptomyces griseoviridis
Cellobiose; Membrane transport (Jirešová, M. (41) 279)

Streptomyces sp.
Ribosome; Ribosomal protein; (HPLC; Heterogeneity) (Fierro, (41) 283)

Succinate
Methanogenic bacterium; Propionate oxidation; (Coculture; ^{13}C-NMR) (Houwen, F.P. (41) 269)

Succinate dehydrogenase
Bacillus subtilis; Operon (Deletion) (Fridén, H. (41) 203)

Sucrase
Bacillus subtilis; Sucrose; Levansucrase (Gene cloning) (Débarbouillé, M. (41) 137)

Sucrose
Bacillus subtilis; Sucrase; Levansucrase (Gene cloning) (Débarbouillé, M. (41) 137)

Sulphur oxidation
Thiobacillus ferrooxidans; Iron (Corbett, C.M. (41) 1)

Symbiotic defective mutant
Rhizobium sp.; (Cowpea; Tn*5* mutagenesis) (McLaughlin, W. (41) 331)

Taxonomy
Saccharopolyspora hirsuta; Fatty acids (Embley, T.M. (41) 131)

Tellurite resistance
Escherichia coli; Plasmid RP4; Transposition (Bradley, D.E. (41) 237)

Temperature
ATP pool; Adenylate energy charge; *Escherichia coli* (Kahru, A. (41) 305)

Testosterone
Corynebacterium (Metabolism) (Nixon, A. (41) 53)

Thiobacillus ferrooxidans
Sulphur oxidation; Iron (Corbett, C.M. (41) 1)

Ti-plasmid
Agrobacterium tumefaciens; Chemotaxis; Acetosyringone (Crown gall, *vir*-region) (Ashby, A.M. (41) 189)

Tn*5* mutagenesis
Rhizobium sp.; Symbiotic defective mutant; Cowpea (McLaughlin, W. (41) 331)

Transcription
Bacillus subtilis; *Escherichia coli*; Bacteriophage T5; Promoter (Melin, L. (41) 141)

Transformation
Azotobacter vinelandii; Competence; Iron; Siderophore (Page, W.J. (41) 257)

Plasmid; *Streptococcus pneumoniae*; Alkaline phosphatase; Gene cloning (Pozzi, G. (41) 309)

Transposition
Escherichia coli; Plasmid RP4; Tellurite resistance (Bradley, D.E. (41) 237)

Trehalose
Mucor rouxii; Glycerol; Ethanol; Spore germination (Van Laere, A.J. (41) 247)

Treponema phagedenis
Outer sheath; *N,N'*-Dicyclohexylcarbodiimide (Masuda, K. (41) 73)

Trichoderma reesei
Protein secretion; Tween; Membrane fluidity; Fatty acid (Panda, T. (41) 85)

Trifluoperazine
Candida albicans; Morphogenesis (Roy, B.G. (41) 327)

Tween
Trichoderma reesei; Protein secretion; Membrane fluidity; Fatty acid (Panda, T. (41) 85)

Verocytotoxin
Escherichia coli; Enterotoxin; Cytotoxin (Vero cell purification) (Petric, M. (41) 63)

Vibrio vulnificus
Antiserum; Hemolysin; Immunization (Liposomes) (Yamanaka, H. (41) 313)

Virulence
Streptococcus sp. (Group B); Capsule; Sialic acid (Ultrastructure) (Molinari, A. (41) 69)

Salmonella typhimurium; HeLa cell invasion; Calcium (Niesel, D.W. (41) 299)

Virulence factor
Iron; *Escherichia coli*; Pyelonephritis (Rat) (Sharma, S. (41) 295)

Vitamin B_{12} receptor
Escherichia coli (Gene cloning, expression) (Moir, P.D. (41) 103)

Vitamin K_2
Nocardia brasiliensis; Menaquinone; Isoprenoid quinone (structure) (Collins, M.D. (41) 35)

Vitamin K_2
Menaquinone; Anaerobic bacterium (18 species) (Fernandez, F. (41) 175)

Water stress
Nostoc commune; Immobilized cell; DNA modification (Stulp, B.K. (41) 241)

Yeast
Ceratocystis ulmi; Calmodulin; Filamentous fungus; Fungal dimorphism (Muthukumar, G. (41) 253)

Yersinia enterocolitica
Cell invasion, epithelial (Inhibition with anticellular antibody) (Schiemann, D.A. (41) 19)

Zymomonas mobilis
Penicillin-binding protein; Mecillinam; Benzylpenicillin (Karibian, D. (41) 121)